

CLAIMS

We claim:

1. A clamp for gripping a part, comprising:  
a body defining an opening closed at one end by a plate;  
a first arm partially disposed within said opening and  
extending outwardly therefrom, said first arm configured to engage a  
5 first side of said part;  
a second arm partially disposed about said body and spaced  
from said first arm, said second arm configured to engage a second  
side of said part; and,  
an assembly including  
10 a first member extending along a first axis through at  
least portions of said first and second arms;  
a second member disposed within a first bore in said  
first arm and configured to receive said first member; and,  
a third member disposed within a second bore in said  
15 first arm, said third member disposed about a second axis extending  
perpendicular to said first axis;  
wherein rotation of said first member in a first rotational  
direction causes movement of said second member along said first  
axis in a first axial direction and corresponding movement of said  
20 third member along said second axis whereby said third member  
engages said plate in said body to secure a position of said first  
and second arms relative to said body.

2. The clamp of claim 1 wherein said body has radially inner  
and outer spherical surfaces, said first arm has a spherical surface  
complementary to said inner spherical surface of said body and said  
second arm has a spherical surface complementary to said outer  
5 spherical surface of said body.

3. The clamp of claim 1 wherein a radially inner surface of  
said body defines a first plurality of threads and said plate  
includes a second plurality of threads configured to mate with said  
first plurality of threads.

4. The clamp of claim 1 wherein at least one of said first and second arms includes a wear pad mounted thereon and configured to engage said part.

5. The clamp of claim 1, further comprising a washer disposed about said first member wherein movement of said second member along said first axis in said first axial direction compresses said washer.

6. The clamp of claim 1 wherein said second member has a first cam surface and said third member has a second cam surface configured to engage said first cam surface.

7. The clamp of claim 1 wherein said first and second cam surfaces extend parallel to one another.

8. The clamp of claim 1 wherein said first and second cam surfaces are disposed at an angle relative to both of said first and second axes.

9. A clamp for gripping a part, comprising:  
a body defining an opening closed at one end by a plate;  
a first arm partially disposed within said opening and  
extending outwardly therefrom, said first arm configured to engage a  
5 first side of said part;

a second arm partially disposed about said body and spaced  
from said first arm, said second arm configured to engage a second  
side of said part; and,

an assembly including

10 a fastener extending along a first axis through at least  
portions of said first and second arms;

a nut disposed within a first bore in said first arm and  
configured to receive said fastener; and,

15 a pushrod disposed within a second bore in said first arm,  
said pushrod disposed about a second axis extending perpendicular to  
said first axis

20 wherein rotation of said fastener in a first rotational  
direction causes movement of said nut along said first axis in a  
first axial direction and corresponding movement of said pushrod  
along said second axis whereby said pushrod engages said plate in  
said body to secure said first and second arms relative to said  
body.

10. The clamp of claim 9 wherein said body has radially inner  
and outer spherical surfaces, said first arm has a spherical surface  
complementary to said inner spherical surface of said body and said  
second arm has a spherical surface complementary to said outer  
5 spherical surface of said body.

11. The clamp of claim 9 wherein a radially inner surface of  
said body defines a first plurality of threads and said plate  
includes a second plurality of threads configured to mate with said  
first plurality of threads.

12. The clamp of claim 9 wherein at least one of said first  
and second arms includes a wear pad mounted thereon and configured  
to engage said part.

13. The clamp of claim 9, further comprising a washer disposed about said fastener wherein movement of said nut along said first axis in said first axial direction compresses said washer.

14. The clamp of claim 9 wherein said nut has a first cam surface and said pushrod has a second cam surface configured to engage said first cam surface.

15. The clamp of claim 14 wherein said first and second cam surfaces extend parallel to one another.

16. The clamp of claim 14 wherein said first and second cam surfaces are disposed at an angle relative to both of said first and second axes.

17. A clamp for gripping a part, comprising:  
a body defining an opening closed at one end by a plate;  
a first arm partially disposed within said opening and extending outwardly therefrom, said first arm configured to engage a first side of said part;

a second arm partially disposed about said body and spaced from said first arm, said second arm configured to engage a second side of said part; and,

means for securing said first and second arms relative to said body.

18. The clamp of claim 17 wherein said body has radially inner and outer spherical surfaces, said first arm has a spherical surface complementary to said inner spherical surface of said body and said second arm has a spherical surface complementary to said outer spherical surface of said body.

19. The clamp of claim 17 wherein a radially inner surface of said body defines a first plurality of threads and said plate includes a second plurality of threads configured to mate with said first plurality of threads.

• Atty. Dkt. No.: 60,680-57  
Dana Ref. No.: 6470 MOH  
Express Mail No.: ET931281053US

20. The clamp of claim 17 wherein at least one of said first and second arms includes a wear pad mounted thereon and configured to engage said part.

20070209 1020702